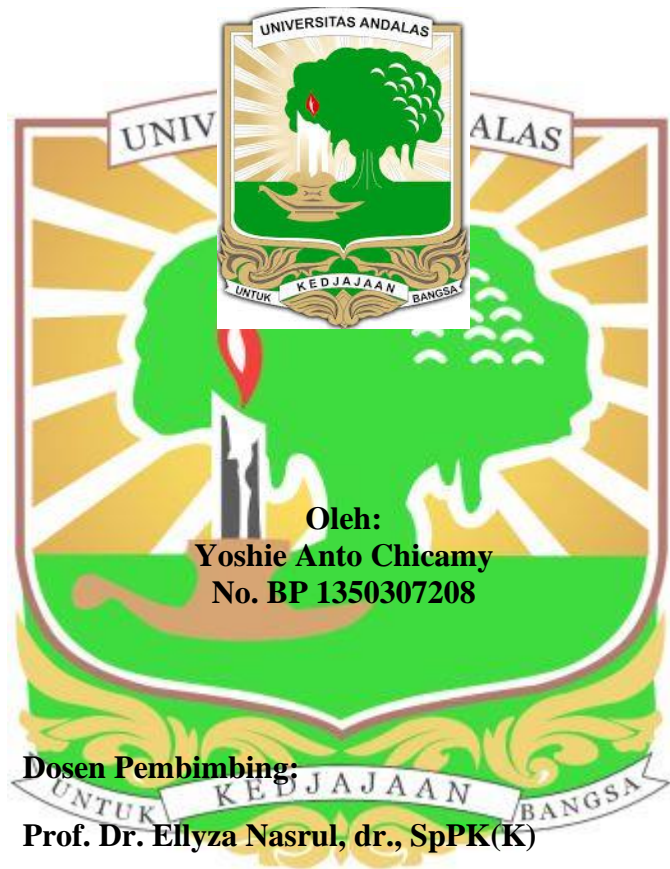


TESIS

**KORELASI RASIO NEUTROFIL LIMFOSIT  
DENGAN PROTEIN C-REAKTIF PADA  
SINDROM KORONER AKUT**



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# KORELASI RASIO NEUTROFIL LIMFOSIT DENGAN PROTEIN C-REAKTIF PADA SINDROM KORONER AKUT

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## ABSTRAK

**Pendahuluan:** Proses inflamasi mendasari terjadinya aterosklerosis sampai instabilitas plak pada sindrom koroner akut (SKA). Rasio neutrofil limfosit (RNL) secara signifikan berhubungan dengan progresivitas aterosklerosis dan proses terjadinya SKA. Protein fase akut *C-reactive protein* (CRP) merupakan penanda inflamasi penyakit kardiovaskular. Centers for Disease Control and Prevention dan The American Heart Association (CDC/AHA) merekomendasikan pemeriksaan CRP dengan metode *high sensitivity* untuk prediksi faktor risiko SKA. Penelitian ini bertujuan untuk mengetahui korelasi RNL dengan CRP pada pasien SKA.

**Metode:** Penelitian analitik dengan rancangan potong lintang dilakukan terhadap 20 pasien SKA di RSUP DR. M. Djamil Padang. Penelitian dilaksanakan mulai Januari 2018 sampai Agustus 2019. Pemeriksaan hematologi lengkap menggunakan alat hematologi otomatis dengan metode flowsitometri, RNL dihitung sebagai perbandingan jumlah neutrofil absolut dengan limfosit absolut, CRP diperiksa di laboratorium Prodia Padang dengan metode *immunochemiluminescent*. Data dianalisis dengan uji korelasi Pearson, bermakna bila  $p < 0,05$ .

**Hasil:** Rerata umur subjek penelitian adalah 61 tahun dengan rentang 42-79 tahun. Subjek penelitian terbanyak adalah laki-laki sebanyak 15 orang (75%) dan diagnosis terbanyak adalah STEMI sebanyak 12 orang (60%). Rerata kadar hsCRP adalah 4,48 (2,9) mg/L. Rerata rasio neutrofil/ limfosit didapatkan 3,98. Analisis korelasi menunjukkan korelasi positif lemah antara RNL dengan CRP ( $r=0,274$ ) dan tidak bermakna secara statistik ( $p=0,244$ ).

**Simpulan:** Rasio neutrofil/limfosit memiliki korelasi positif lemah dengan CRP.

**Kata Kunci:** *C-reactive protein*, rasio neutrofil limfosit, sindrom koroner akut

**CORRELATION OF NEUTROPHIL LYMPHOCYTE RATIO  
WITH C-REACTIVE PROTEIN IN  
ACUTE CORONARY SYNDROME**

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**ABSTRACT**

**Introduction:** The inflammatory process underlies changes in atherosclerosis to instability in acute coronary syndrome (ACS). The neutrophil lymphocyte ratio (RNL) is significantly related to the progression of atherosclerosis and the process of ACS. The acute protein phase C-reactive protein (CRP) is a marker of inflammation of cardiovascular disease. The Centers for Disease Control and Prevention and the American Heart Association (CDC/AHA) discuss CRP examinations with a high sensitivity method for predicting risk factors for ACS. The purpose of this study is to determine correlation between RNL with CRP in SKA patients.

**Methods:** analytic study with cross sectional design was carried out on 20 ACS patients in RSUP DR. M. Djamil Padang. The study was conducted from January 2018 to August 2019. Complete hematological examination using an automated hematological device with the flow cytometry method, RNL was calculated as a comparison of absolute neutrophils with absolute lymphocytes, CRP was examined in the Prodia Padang laboratory with immunochemiluminescent method. Data was analyzed by Pearson correlation test, significant if  $p < 0.05$ .

**Results:** The average age of the study subjects was 61 years with a range of 42-79 years. The most research subjects were 15 men (75%) and the most diagnoses were STEMI which consisted of 12 people (60%). The mean CRP level was 4,48 (2,9) mg/L. The mean neutrophil/lymphocyte ratio was 3.98. Correlation analysis showed a weak positive correlation between NLR and CRP ( $r = 0.274$ ) and not statistically significant ( $p = 0.024$ ).

**Conclusion:** The neutrophil/lymphocyte ratio has a weak positive correlation with CRP.

**Keywords:** C-reactive protein, neutrophil lymphocyte ratio, acute coronary syndrome